

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 10183 (1982): Retractor, Deep, Self-Retaining, Laminectomy [MHD 7: Neurosurgery Instruments Implants and Accessories]



“ज्ञान से एक नये भारत का निर्माण”

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“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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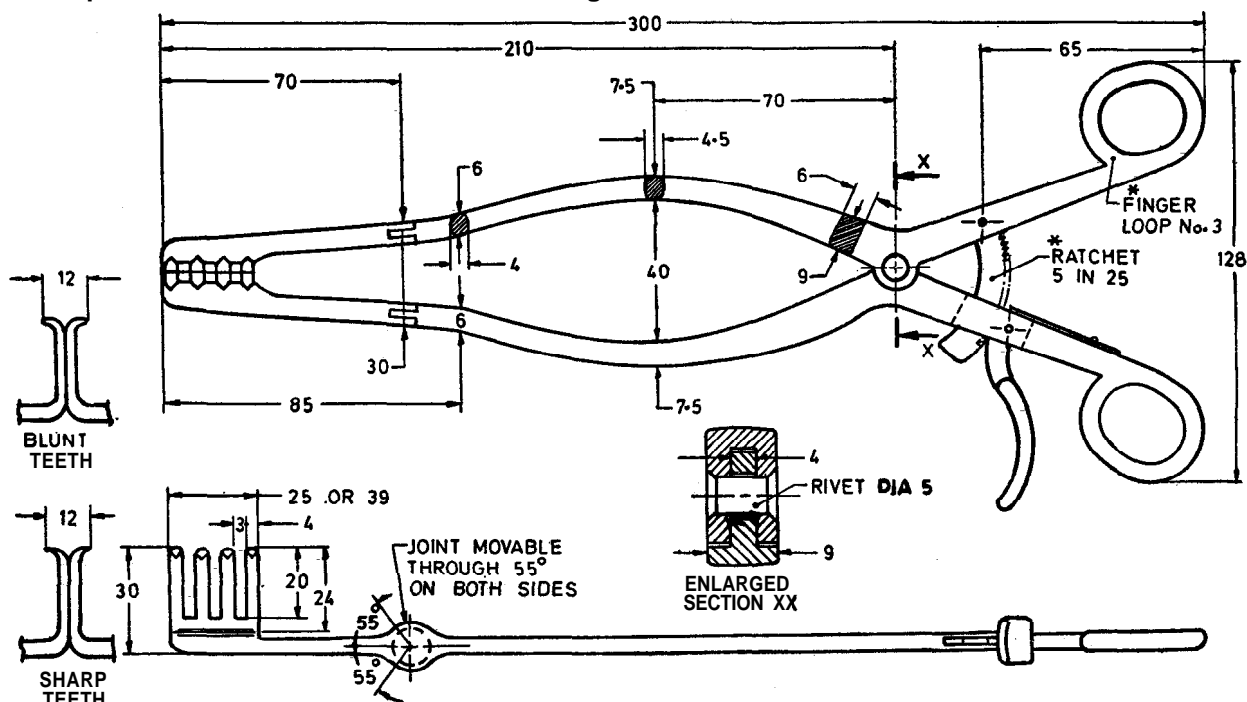


Indian Standard

SPECIFICATION FOR RETRACTOR, DEEP, SELF-RETAINING, LAMINECTOMY

1. Scope — Specifies dimensions, materials and other requirements for self-retaining laminectomy deep retractor used in neurosurgery.

2. Shape and Dimensions — As shown in Fig. 1.



*see IS : 3642 - 1978 General requirements for surgical instruments

All dimensions in millimetres.

FIG. 1 RETRACTOR, DEEP, SELF-RETAINING, LAMINECTOMY

2.1 Tolerances on various dimensions shall be permitted as given below:

- a) ± 0.2 mm for dimensions up to 5.0 mm,
- b) ± 0.5 mm for dimensions above 5.0 mm and up to 10.0 mm,
- c) ± 1.0 mm for dimensions above 10.0 mm and up to 50.0 mm,
- d) ± 2.0 mm for dimensions above 50.0 mm and up to 100.0 mm, and
- e) ± 5.0 mm for dimensions above 100.0 mm.

3, Materials — Shall be as specified below:

Components	Material	Conforming to
Arms and ratchets	Stainless steel	Designation 20Cr13 of IS : 6603-1972 'Specification for stainless steel bars and flats'.
Pivot screw	Stainless steel	Designation 04Cr18Ni10 or 07Cr18Ni9 of IS : 6603-1972 'Specification for stainless steel bars and flats'.
Spring	Stainless steel	Designation 30Cr13 of IS : 6603-1972 'Specification for stainless steel bars and flats'.

Adopted 21 April 1982

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4. Heat Treatment and Hardness

4.1 The component parts of the instrument shall be heat-treated under conditions suitable for the material used.

4.2 The hardness of the **finished** instrument, when determined 'in accordance with IS : 1501-1968 'Method for **Vickers** hardness test for steel', shall be **within** the range of 400 *HV* to 475 *HV*.

5. Workmanship and Finish

5.1 The screw joint shall be symmetrically made. The clearances in the joint shall be minimum to avoid unnecessary gaps.

5.2 The screw in the joint shall be finished flush-with the surfaces of the shanks. The screw shall not present sharp edges when the jaws are moved in any position.

5.3 All the surfaces, except the ratchet teeth, shall be smooth and free from pits, and the edges shall be even.

5.4 The serrations of the jaws and machined faces of the steps of ratchet and inner faces of the screw joint shall be clean and bright, and free from scales. All other parts shall be highly polished.

5.5 The edges of the **retractor prongs** shall taper to blunt or sharp points as shown in Fig. 1. They shall not overlap each other.

5.6 The retractor arms shall close and open smoothly without undue resistance or play at the joint.

5.7 The ratchet teeth shall be well cut, **clean, uniform** and evenly spaced.

5.8 The retractor shall be treated by a suitable passivation process,

5.8.1 The retractor shall be treated in 10 percent (V/V) nitric acid solution for not less than 80 min at a temperature of not less than 10°C and not exceeding 60°C. The retractor shall then be rinsed with water, **dried** in hot air and joints lightly lubricated with a non-toxic and non-corrosive substance.

6. Corrosion Resistance — Test the instrument as prescribed in IS : 7531-1975 'Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments'.

It shall show no sign of corrosion after the test.

7. Marking — Each retractor shall be marked on shanks with the following :

- a) The name or registered trade-mark of the manufacturer; and
- b) The words 'Stainless Steel' or '**SS**'.

7.1 ISI Certification Marking— Details available with the Indian Standards Institution.

8. Packing — Each retractor shall be wrapped in a moisture-proof paper or put in a polyethylene bag. Each retractor shall be packed in an Individual cardboard carton. The packing may also be done as agreed to between the purchaser and the supplier.